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10/535,069	12/28/2005	Stefan Capelle	VANM199.002APC	1840

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EXAMINER	
KING, FELICIA C	

ART UNIT	PAPER NUMBER
1794	

NOTIFICATION DATE	DELIVERY MODE
07/22/2009	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/535,069	CAPELLE ET AL.	
	Examiner	Art Unit	
	FELICIA C. KING	1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *14 April 2009*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *29-65* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *29-65* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

This detailed action is in response to newly added claims 29-65 filed 4/14/09. Claims 1-28 are cancelled. Claims 10 and 22 were previously cancelled.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 33, 41, 52 and 62 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

3. Claim 33 improperly depends from Claim 29, where claim 29 recites that "at least one" of the amino acids is present and Claim 33 recites a ratio requiring all four amino acids to be present. It appears as if Claim 33 should depend from claim 32. Appropriate correction is required.

4. Claim 41 improperly depends from Claim 37, where claim 37 recites that "at least one" of the amino acids is present and Claim 41 recites a ratio requiring all four amino acids to be present. It appears as if Claim 41 should depend from claim 40. Appropriate correction is required.

5. Claims 52 and 62 use the term "and/or" which renders the claim indefinite because the claim is not clear as to whether a peptide and a yeast extract are required to be found together or whether the yeast extract could fulfill the limitation of the claim independently of the peptide.

Claim Rejections - 35 USC § 103

6. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

7. Claims 29-31,37-39,46-48,51-53,56-58, and 61-63 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ano et al. (US 3,536,498) and further in view of Ziemke et al. (US 4,034,125).

Regarding Claims 29 and 37: Ano discloses a free amino acid blend comprising the amino acids leucine, iso-leucine and phenylalanine [col. 2, lines 36-38], yeast [col. 2, lines 30-34; col. 4, line 34 , and where the combination has a dry matter content of at least 90% [col. 3, lines 33-34] but does not disclose sourdough in the blend. However, Ziemke discloses a dry sourdough system [col. 1, lines 5-6.

At the time of the invention it would have been obvious to one having the teachings of Ano and Ziemke before him or her to modify the process of Ano to include the sourdough system of Ziemke because the sourdough would have added the flavors typical of sourdoughs to the blend. Further, a baker or other user would have found it easier to work with dried sourdough as it is easier to handle [Ziemke, col. 1, 49-51].

Regarding Claims 30 and 38: Ano discloses a free amino acid blend as discussed above but does not disclose where the blend has a 95% dry matter content. Ziemke discloses sourdough as discussed above.

Ano discloses a blend having a 90% dry matter content and although Ano does not disclose 95% as in the instant claim, it would have been obvious to one having ordinary skill in the art at the time of the invention to adjust the percentage of dry matter for the intended application, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272.

Regarding Claims 31 and 39: Ano discloses a free amino acid blend as discussed above and where the amino acid blend comprises at least Phenylalanine [col. 2, line 38]. Ziemke discloses sourdough as discussed above.

Regarding Claims 46, 47, 56 , 57: Ano discloses a free amino acid blend as discussed above and where the amino acid blend increases the flavor metabolism of yeast and/or bacteria in long fermentation systems [col. 2, lines 19 – 26 and col. 3, Fermentation power] but does not disclose it in a bakery product. However, Ziemke discloses dried sourdough as discussed above and further discloses using a dried sourdough to make sourdough bread (which is a bakery product) in a sponge and dough process.

At the time of the invention, it would have been obvious to one of ordinary skill in the art having the teachings of Ano and Ziemke before him or her to include the blend in a sourdough process because the blend already comprises flavor components necessary to achieve the characteristic taste of sourdough bread (lactic acid and acetic acid) and upon addition to yeast and water, in a sponge or straight dough process, would result in sourdough bread having the added nutritional value of the amino acid blend.

Regarding Claim 48 and 58: Ano discloses a free amino acid blend as discussed above and further discloses adding a carbon source which is sugar [col. 4, line 33]. Ziemke discloses sourdough as discussed above.

Regarding Claims 51 and 61: Ano discloses a free amino acid blend as discussed above and further discloses adding yeast [Experiment 2]. Ziemke discloses sourdough as discussed above.

Regarding Claims 52 and 62: Ano discloses a free amino acid blend as discussed above and further discloses adding a yeast which is contain yeast cells and therefore is considered high in nucleotide content [Experiment 2]. Ziemke discloses sourdough as discussed above.

At the time of the invention it would have been obvious to one of ordinary skill in the art having the teachings of Ano and Ziemke obvious that the yeast cells would have been high in nucleotide content since yeast cells are living things made up of genetic material/nucleotides which form DNA.

Regarding Claims 53 and 63: Ano discloses a free amino acid blend as discussed above and further discloses where the dosage of the blend of amino acids is at least 0.001% of a final product [col. 2, lines 41-44 and col. 4, line 34]. Ziemke discloses sourdough as discussed above.

8. **Claims 32, 33, 40, and 41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ano et al. (US 3,536,498), and further in view of Ziemke et al. (US 4,034,125) and Wiseblatt (US 3,304,184).**

Regarding Claims 32 and 40: Ano discloses a free amino acid blend comprising leucine, iso-leucine and phenylalanine as discussed above but does not explicitly disclose valine as an amino acid for use in the formulation. Ziemke discloses sourdough as discussed above. However, Wiseblatt discloses valine, as an amino acid for the improvement of flavor in bread [col. 2, line 30 and line 69-70].

At the time of the invention, it would have been obvious to one having ordinary skill in the art having the teachings of Ano, Ziemke, and Wiseblatt before him or her to modify the preferred amino acid blend of Ano to incorporate the valine of Wiseblatt because valine can be substituted for other amino acids allowed for in Ano. Further, valine is desirable because valine contributes to the strong yeasty flavor of bread [col. 2, line 30].

Regarding Claims 33 and 41: Ano discloses the free amino acid blend wherein the amino acid ratio of the blend is: Leucine: 2; Iso-Leucine: 0.5; and Phenylalanine: 0.5 [col. 2, table 1] but does not disclose valine at .6 in the amino acid blend. Ziemke discloses sourdough as discussed

above. However, Wiseblatt discloses valine in an amount of .005%, as an amino acid for the improvement of flavor in bread [col. 2, line 30 and line 69-70] as discussed above.

At the time of the invention, it would have been obvious to one having ordinary skill in the art having the teachings of Ano, Ziemke, and Wiseblatt before him or her to modify the preferred amino acid blend in specific proportions because Wiseblatt discloses that the flavor of bread may be modified by using various mixtures of amino acids in suitable proportions [col. 2, lines 47-48].

Further, it would have been obvious to one having ordinary skill in the art at the time of the invention to adjust the ratio of amino acids for the intended application, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch,* 617 F.2d 272.

9. **Claims 34, 42, 50, and 60 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ano et al. (US 3,536,498), and further in view of Ziemke et al. (US 4,034,125) and Weber (US 2,434,087).**

Regarding Claims 34 and 42: Ano discloses the free amino acid blend as discussed above but does not disclose where the amino acids are obtained from a protein hydrolysate. Ziemke discloses sourdough as discussed above. However, Weber discloses hydrolyzing proteins in order to obtain amino acids for use in bread doughs [col. 1, lines 4-9; 32-37] and further discloses using hydrolyzed proteins that provide leucine, isoleucine, valine and phenylalanine [col. 3. lines 10-23; Claim 9].

At the time of the invention, it would have been obvious to one of ordinary skill in the art having the teachings of Ano, Ziemke and Weber before him or her to modify the amino acid source for a protein hydrolysate because the addition of synthetic or separately produced amino acids is an expensive process [Weber, col. 1, lines 12-15] and therefore adding a protein hydrolysate known to

contain the desired amino would still provide flavor and nutritional value to the bread product while keeping production costs to a minimum.

Regarding Claims 50 and 60: Ano discloses a process for making the free amino acid blend as discussed above but does not disclose where the amino acids are obtained from a protein hydrolysate. Ziemke discloses sourdough as discussed above. However, Weber discloses hydrolyzing proteins in order to obtain amino acids for use in bread doughs [col. 1, lines 4-9; 32-37] and further discloses using hydrolyzed proteins that provide leucine, isoleucine, valine and phenylalanine [col. 3. lines 10-23; Claim 9].

At the time of the invention, it would have been obvious to one of ordinary skill in the art having the teachings of Ano, Ziemke and Weber before him or her to modify the amino acid source for a protein hydrolysate because the addition of synthetic or separately produced amino acids is an expensive process [Weber, col. 1, lines 12-15] and therefore adding a protein hydrolysate known to contain the desired amino would still provide flavor and nutritional value to the bread product while keeping production costs to a minimum.

10. **Claims 35 and 43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ano et al. (US 3,536,498), and further in view of Ziemke et al. (US 4,034,125) and Johnson (US 3,897,568).**

Regarding Claims 35 and 43: Ano discloses the free amino acid blend as discussed above but does not disclose where the blend is produced by co-extrusion or blending. Ziemke discloses sourdough as discussed above. However, Johnson discloses an ingredient formulation produced by co-extrusion or dry- blending [col. 8, lines 19-20].

At the time of the invention, it would have been obvious to one of ordinary skill in the art, having the teachings of Ano, Ziemke, and Johnson before him or her to modify the production of

ingredient formulation of Ano for the dry blending of Johnson because dry mixtures can be readily blended, stored, and transported [col.7, lines 42-45].

11. **Claims 36 and 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ano et al. (US 3,536,498), and further in view of Ziemke et al. (US 4,034,125) and Rudel (US 4,961,937).**

Regarding Claims 36 and 44: Ano discloses the free amino acid blend as discussed above but does not disclose where the blend is vacuum packaged. Ziemke discloses sourdough as discussed above. However, Rudel discloses a vacuum packaged dough product [col. 23, lines 9-11].

At the time of the invention, it would have been obvious to one of ordinary skill in the art having the teachings of Ano, Ziemke, and Rudel before him or her to modify the disclosure in Ano to include the vacuum packaging step in Rudel because after the production of the ingredient formulation it would have to be preserved in some manner and manner of packaging is a factor in the maintenance of flavor in such compositions [col. 11, lines 51-62].

12. **Claim 45 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ano et al. (US 3,536,498), and further in view of Ziemke (US 4,034,125), Boecker (EP 1110458 Derwent Abstract) and Adams et al. (2001 Fermentation and Food Safety").**

Regarding Claim 45: Ano discloses the free amino acid blend with yeast as discussed above but does not disclose fermenting a dried fermented sourdough with yeast, flour and water. Ziemke discloses sourdough as discussed above and discloses that fermented sourdough is usually added to flour and water (french or sour dough bread formula) [col. 1, lines 9-24] but does not disclose where the sourdough of it's invention was initially fermented. However, Boecker discloses where a sourdough is prepared with lactobacilli (as is known in the art) and then dried for further

use in preparation of a sourdough product [abstract]. Adams discloses that it is well known to take a small quantity of previously fermented sourdough and to mix it with new dough [pg. 6].

At the time of the invention, it would have been obvious to one of ordinary skill in the art having the teachings of Ano, Ziemke, Boecker and Adams before him or her to modify the amino acid blend to include fermenting a fermented dried sourdough with yeast, flour and water flour and water since it is well known in the art to make bread by adding a portion of a fermented sourdough to flour and water and further is also known in the art to take a small amount of fermented sourdough and add it to new dough (generally containing yeast, water and flour).

13. **Claims 49 and 59 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ano et al. (US 3,536,498), and further in view of Ziemke (US 4,034,125)and Lendvay et al. (US 3,499,765).**

Regarding Claim 49 and 59: Ano discloses the free amino acid blend with yeast as discussed above but does not disclose proteases, transaminases, carboxylases, dehydrogenases or esterases. Ziemke discloses sourdough as discussed above. However, Lendvay discloses protesases [col. 7, line 34].

At the time of the invention, it would have been obvious to one of ordinary skill in the art having the teachings of Ano, Ziemke, and Lendvay before him or her to modify the method of making the composition in Ano to incorporate the protease in Lendvay because proteases can be easily incorporated into a process for making dough as evidenced by the mixtures presented in Lendvay [col. 7, lines 29-35]. Further, the incorporation of the enzyme causes a reaction between amino acids and sugars which result in a bread like flavor [col. 7, lines 12-14].

14. **Claims 54, 55, 64, and 65 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ano et al. (US 3,536,498) in further view of Ziemke (US 4,034,125) and C. Thiele et al., Cereal Chemistry, Vol. 79, Number 1.**

Regarding Claim 54 and 64: Ano discloses a free amino acid blend as discussed above and further discloses where the dosage of the blend of amino acids is at least 0.001% of a final product [col. 2, lines 41-44 and col. 4, line 34] but does not disclose where the dosage of the blend of amino acids is about 0.05% on total flour of a bakery product.. Ziemke discloses sourdough as discussed above. However, Thiele discloses that increasing the concentration of free amino acids improves the flavor of bread [Thiele, abstract]. Thus, the increase in the percentage of free amino acids from 0.001% to about .05% is a result effective variable in the improvement of flavor in a bakery product.

At the time of the invention, it would have been obvious to one of ordinary skill in the art having the teachings of Ano, Ziemke, and Thiele before him or her to modify the percentage of amino acid blend in Ano to a higher percentage as taught by Thiele because Thiele teaches that a higher percentage of amino acid will enhance flavor in bread. Therefore, it would have been obvious to utilize an amino acid blend at higher an amino acid percentage to obtain a more flavorful bread.

Further, it would have been obvious to one having ordinary skill in the art at the time of the invention to adjust the amount of the blend of amino acids for the intended application, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch,* 617 F.2d 272.

Regarding Claims 55 and 65: Ano discloses a free amino acid blend as discussed above and further discloses where the dosage of the blend of amino acids is at least 0.001% of a final product [col. 2, lines 41-44 and col. 4, line 34] but does not disclose where the dosage of the blend

of amino acids is about 0.0375% on total flour of a bakery product.. Ziemke discloses sourdough as discussed above. However, Thiele discloses that increasing the concentration of free amino acids improves the flavor of bread [Thiele, abstract]. Thus, the increase in the percentage of free amino acids from 0.001% to about .0375% is a result effective variable in the improvement of flavor in a bakery product.

At the time of the invention, it would have been obvious to one of ordinary skill in the art having the teachings of Ano and Thiele before him or her to modify the percentage of amino acid blend in Ano to a higher percentage as taught by Thiele because Thiele teaches that a higher percentage of amino acid will enhance flavor in bread. Therefore, it would have been obvious to utilize an amino acid blend at higher an amino acid percentage to obtain a more flavorful bread.

Further, it would have been obvious to one having ordinary skill in the art at the time of the invention to adjust the amount of the blend of amino acids for the intended application, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch,* 617 F.2d 272.

Response to Arguments

Examiner notes that applicant states that support for new claim 34 is found in one of claims 18, 19, 21, 25 or 26. However, support for claim 34 was found in paragraph [0018] of the Specification.

15. Applicant's arguments filed 4/14/09 with respect to claims 1-28 rejections under **Ano et al. (US 3,536,498)** and various secondary references **Wiseblatt (US 3,304,184); C. Thiele et al., Cereal Chemistry, Vol. 79, Number 1; Ziemke et al (US 4,034,125); Lendvay et al. (US 3,499,765); Johnson (US 3,897,568); Rudel (US 4,961,937)** were addressed by applicant as applied to the newly added claims 29-65 and have been fully considered but they are not persuasive.

16. In regards in to newly added claims 29 -65, applicant contends that Ano by itself or in combination with any of the previously cited references does not disclose the amino acids cited in the instant claims. Applicant is incorrect; as Ano recites three out of the four amino acids disclosed in claim 29 as discussed above and when used in combination with Wisenblatt, discloses all four amino acids as discussed above. In response to applicant's arguments against Ano individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

17. Further on page 6 of the Remarks, applicant contends that Ano does not disclose sourdough. In response to applicant's arguments against the references individually that Ano does not disclose sourdough, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). Ano is combined with the teachings of Ziemke and as combined discloses a blend of sourdough and amino acids.

18. Further, applicant's contend that the addition of amino acids provide unexpectedly provided enhanced/improved sourdough flavor. However, Wisenblatt discloses that the addition of amino acids are known to improve the flavor of bread [col. 2, lines 47-48]and further that addition of the amino acid valine improves the yeasty flavor in bread [col. 2, line 30]. Therefore the improvement of flavor in bread cannot be deemed unexpected where it in known that the addition of amino acids improves bread flavor.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to FELICIA C. KING whose telephone number is (571)270-3733. The examiner can normally be reached on Mon- Thu 7:30 a.m.- 5:00 p.m.; Fri 7:30 a.m. - 4:00 p.m. alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jennifer McNeil can be reached on 571-272-1540. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/F. K./
Examiner, Art Unit 1794

/JENNIFER MCNEIL/

Supervisory Patent Examiner, Art Unit 1794